VSEKHSVYATSKIY, S.K. [Vsekhsvyats'kyi, S.K.], doktor fiz.-mat.nauk

International Geophysical Year. Nauka i zhyttia 7 no.6:21-24 Je '57. (MIRA 12:10)
(International Geophysical Year, 1957-1958)

VSEKHSVYATSKIY, S. K.

33-4-6/19

AUTHOR: Vsekhsvyatskiy, S. K. and Meshcheryakova-Babich, O. I.

TITLE: Distribution of the Elements of Orbits in the Eruption Theory. (Raspredeleniye elementov orbit v teorii izverzheniya).

PERIODICAL: Astronomicheskiy Zhurnal, 1957, Vol.34, No.4. pp.568-580 (USSR).

ABSTRACT: Vsekhsvyatskiy (Refs. 3 and 4) has shown that the eruption theory can explain orbital characteristics of short-period and periodic comets. Dukhnovskii (Ref.5) has argued against these conclusions but his results are inadmissible because of elementary mistakes. Dukhnovskii maintains that Soviet Astronomers have only worked out the plane problem while already in 1934 Vsekhsvyatskiy had worked out the spatial case and obtained results which clearly supported the eruption theory.

The aim of the present work is to establish the theoretical distribution of elements of orbits of short period comets on the basis of eruption theory. The following problem is taken up: to find the distribution of elements of orbits of the eruption products which, on the boundary of the sphere of influence of Jupiter, have a uniform distribution of directions and magnitudes

Card 1/3

Distribution of the Elements of Orbits in the Eruption Theory.

of relative velocities, if the latter lie within certain limits. The upper limit is taken as 8.5 km/sec and the lower as zero. The centre of the distribution of the relative velocities is taken to be coincident with the centre of the planet, i.e. the linear dimensions of the sphere of influence are assumed to be small compared with planet - sun distance. The planet is assumed to move in a circle and the attraction due to the planet is neglected beyond the boundary of the sphere of influence. These simplifications should not lead to any essential errors.

A theoretical expression for the above distribution is obtained and is in good agreement with observations. A comparison of the theoretical and observed distributions indicates that during the last two centuries short period comets were formed as a result of eruption processes in Jupiter's system. The value of the relative velocity did not, in the mean, exceed H = 0.23 (i.e. 6.9 km/sec). This corresponds to a maximum possible velocity on the surface of the satellites of the order of 7-9 km/sec.

33-4-6/19

Distribution of the Elements of Orbits in the Eruption Theory.

Using the known number of short period comets in the Jupiter family (65 comets) the total number of cometary objects thrown out from that family may be estimated. This is of the order of 600-800. It was found that the number of short-period comets as a function of the perihelion distance is proportional to $q^{0.9}$, and increases rapidly towards Jupiter's orbit for r> A.U. It is shown that Dubyago's hypothesis (Ref.9) of condensation of short period comets in the zone of motion of Jupiter is inconsistent and erroneous. There are 7 figures, 7 tables, and 9 references, 7 of which are Slavic.

SUBMITTED: September 17, 1956.

ASSOCIATION: Department of Astronomy of the Kiev State University. (Kafedra Astronomii Kiyevskogo Gosudarstvennogo Universiteta)

AVAILABLE: Library of Congress

Card 3/3

VSEKHSVYATSKIY, S.K.

Arend-Roland's comet (1956 h). Astron.tsir. no.180:10 My '57.
(MIRA 13:4)

(Comets--1956)

VSEKHSVYATSKIY, S.K.

Brightness of Arend-Roland's comet (1956 h). Astron. tsir. no.182: 1-2 Je '57. (MIRA 11:3)

1. Kafedra astronomii Kiyevskogo universiteta imeni T.G. Shevchenko.
(Comets--1956)

TERNO; ZVEREV; VASIL'YEV; PARSHIN; VSEKHSVYATSKIY; TIKHOV; KHAVTASI; BAKHAREV; LAZAREVSKIY

Mrkos' comet (1957 d). Astron.tsir. no.184:1-3 S '57. (MIRA 11:4)

(Comets--1957)

VSEKHSVYATSKIY, S.K.

Observations of Aren-Roland's comet. Astron.tsir. no.184:7-10 S '57.
(MIRA 11:4)

1. Kafedra astronomii Kiyevskogo gosudarstvennogo universiteta im. T.G. Shevchenko.
(Comets--1956)

VSEKHSVYATSKIY, S.K.

Visual observations and evaluations of the brightness of Mrkos' comet (1957 d). Astron.tsir. no.185:6-8 O '57. (MIRA 11:4)

1.Kafedra astronomii Kiyevskogo universiteta im. T.S. Shevchenko.
(Comets--1957)

Vsekhsvyats'kyy, S.K.

VSEKHSVYATS'KIY, S.K.; PETRUSENKO, A.M.

P.N. Lebedev, outstanding physicist and materialist ("P.N. Lebedev, outstanding physicist and materialist" by A.V. Shugalin. Reviewed by S.K. Vsekhsviats'kyi, A.M. Petrusenko). Visnyk AN URSR 28 no.7: 73-76 Jl '57. (MIRA 11:1)

(Lebedev, Petr Nikolaevich, 1866-1912)

VSEKHSVYATSKIY, S. K. and G. M. NIKOL'SKIY

"Structure of the Solar Corona of June 30, 1954"

(Total Eclipse of the Sun, February 25, 1952 and June 30, 1954, Transactions of the Expedition to Observe Solar Eclipses) Moscow, Izd-vo AN SSSR, 1958. 357 p.

VSEKHSVYATSKIY, Sergey Konstantinovich [Vsekhsviats'kyi, S.K.], prof.; KAZYUTINSKIY, V.V. [Kaziutyns'kyi, V.V.], red.; YURASOV, V.G. [IUrasov, V.H.], otv. za vypusk

[Contemporary science on the origin and evolution of celestial bodies; data for lectures] Suchasna nauka pro pokhodzhennia i rozvytok nebesnykh til; materialy do lektsii. Kyiv, 1958. 24 p. (Tovarystvo dlia poshyrennia politychnykh i naukovykh znan' Ukrains'koi RSR. Ser.10, no.20). (MIRA 14:1)

(Cosmogony)

3(1) PHASE I BOOK EXPLOITATION SOV/1692

Vsekhsvyatskiy, Sergey Konstantinovich

Malyye tela solnechnoy sistemy (Small Bodies in the Solar System) Moscow, Gostekhizdat, 1958. 47 p. 25,000 copies printed.

Ed.: V.A. Mezentsev; Tech. Ed.: K.F. Brudno.

PURPOSE: This popular-science booklet is intended for the general reader.

COVERAGE: The author, a Soviet astronomer who specializes in comets, describes small cosmic bodies such as comets, meteors, asteroids and cosmic dust, and gives an explanation as to their origin. No personalities are mentioned. No references are given.

TABLE OF CONTENTS:

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Small Bodies in the Solar System SOV/1692

Small Bodies in the Solar System 7

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Comets, Asteroids, and Meteoric Bodies 23

The "Age" of Meteoric Particles 26

The Origin of Comets, Meteoric Dust, and Cosmic Rocks in the Solar System 28

Short-Period Comets and Their Formation 35

The Eruption Theory and the Solar System 44

AVAILABLE: Library of Congress

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MM/mas
6-18-59

PHASE I BOOK EXPLOITATION 666

Vsekhsvyatskiy, Sergey Konstantinovich

Fizicheskiye kharakteristiki komet (Physical Characteristics of Comets) Moscow, Gos. izd-vo fiziko-mat. lit-ry, 1958. 575 p. 2,000 copies printed.

Ed.: Samsonenko, L.V.; Tech. Ed.: Akhlamov, S.N.

PURPOSE: This book is intended for astronomers, students, and graduate students in astronomy. It can also be useful to others interested in comets, their observation, and the history of astronomy.

COVERAGE: The book contains data on the nature of comets, their origin and evolution, and a catalog of every comet ever known. The main part of the book is devoted to a detailed description of the physical characteristics of comets and the circumstances under which they were discovered. The book also covers photometric study of comets and the results of a statistical study of the absolute magnitude of comets. The last part of the book on the observation of comets is not a complete study, nor was it intended to be such. Recognition for help in compiling the book is given to the author's wife, E. I. Vsekhsvyatskaya, and to T. A. Vodop'yanovaya, G. M. Nikol'skiy, and S. A. Glebova

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of the Department of Astronomy, Kiev University. There are 155 references for Parts I and II, 89 Soviet, 31 English, 25 German, 7 French, 2 Dutch, 1 Italian. Six Soviet sources and 114 non-Russian language sources were used in the compilation of Part III. In this section, by far the main part of the book, the source material is listed after each entry of the individual comet being studied.

TABLE OF CONTENTS:

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PART I. GENERAL DATA ON COMETS

Ch. I. The Nature of Comets 7
Comets in the solar system 7
The nature of comets and theories of their form 12
The physics and chemistry of comets 14
The evolution and origin of comets 17
Processes occuring on planets and the origin of comets 20

Ch. II. Photometry of Comets
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AVAILABLE: Library of Congress

Card 3/3

BK/fal
11-4-58

VSEKHSVYATSKIY, S.K. [Vsekhsviats'kyi, S.K.]

Photographic and visual observations of Arend-Roland's comet. Visnyk Kyiv. un. Ser. astron., mat. ta mekh. no. 1:125-127 '58. (MIRA 14:5)

(Comets—1956)

S/035/61/000/003/045/048
A001/A101

3,1550

AUTHOR: Vsekhsvyatskiy, S.K.

TITLE: Luminosity of the comet 1956 h (Arend-Roland)

PERIODICAL: Referativnyy zhurnal. Astronomiya i Geodeziya, no. 3, 1961, 63-64, abstract 3A576 ("Visnyk Kyyivs'k. un-tu", 1958, no. 1, Ser. astron. matem. ta mekhan., no. 1, 129 - 130)

TEXT: The luminosity and magnitude of the comet were estimated from observations with field glasses (50 mmx7) and a binocular tube and a comparison with off-focus images of the neighboring stars. The observations were conducted in Moscow, Kiyev and Crimea (Crimean Astrophysical Observatory) from January 23 to June 4, 1957. The maximum luminosity of 0^{m} took place on April 25, and by the end of June the luminosity decreased down to $7^{m}.8$.

S. V.

[Abstracter's note: Complete translation]

Card 1/1

S/035/61/000/003/046/048
A001/A101

3,1550

AUTHOR: Vsekhsvyatskiy, S.K.

TITLE: Visual observations and estimates of luminosity of the comet 1957 (Mrkos)

PERIODICAL: Referativnyy zhurnal. Astronomiya i Geodeziya, no. 3, 1961, 54, abstract 3A580 ("Visnyk Kyyivs'k un-tu", 1958, no. 1, Ser. astron., matem. ta mekhan., no. 1, 131-133, Ukrainian, Russian summary)

TEXT: The comet 1957 d was observed in Kiyev from August 7 to September 14, 1957. Field glasses (50 mm x 7) and a 70-mm tube were usef for estimating its luminosity. Its stellar magnitude varied from $2^m.0$ (on August 7) to $5^m.2$ (on September 14). The tail length and the color of the cometary head were noted. During the first days the nucleus was bright-yellow, the tail and the head were of a reddish shade; the parabolic outline of the head was well visible. On August 9, with magnification 100, elongation of the nucleus in direction perpendicular to the tail axis was noticed.

S. V.

[Abstracter's note: Complete translation]

Card 1/1

VSEKHSVYATSKIY, S.K. [Vsekhsviats'kyi, S.K.]

Photometry of comets. Visnyk Kyiv. un. Ser. astron., mat. ta mekh. no. 1:135-144 '58. (MIRA 14:5)
(Photometry, Astronomical)

YS

AUTHOR: ~~Yaskhevyatskiy, S.K.,~~ Babich, O.I. and Kazyutinskiy, V.V. 53-35-3-16/27

TITLE: On the Question Concerning the Capture Hypothesis of the Formation of Short-Periodic Comets (K voprosu o gipoteze obrazovaniya korotkoperiodicheskikh komet putem zakhvata)

PERIODICAL: Astronomicheskiy zhurnal, 1958, Vol 35, Nr 3, pp 473-478 (USSR)

ABSTRACT: The present paper has a polemic character. Starting from the capture hypothesis Shteyns [Ref 7] tried in 1957 to explain the absence of retrograde motions for short-periodic comets by their disintegration and obtained results contradictory to Newton's well-known results [Ref 8] . These contradictory results cause the authors to investigate the distribution of the captured orbits in the plane of the Jupiter orbit. It was supposed : A circular orbit for Jupiter, disturbances by the sun and other planets can be neglected etc. The method of Laplace (transition to the planeto-central motion) was used. The calculation of 216 orbits showed :

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On the Question Concerning the Capture Hypothesis of the Formation of Short-Periodic Comets

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parabolas $e = 0,98 - 1,05$	hyperbolas $e > 1,05$	ellipses $e < 0,98$
140	37	39
among them in the zone of visibility ($q = a(1-e) < 3$)		
103	18	14
among them with direct motion		
49	15	11
among them with retrograde motion		
54	3	3

The authors use this table and the conclusions resulting from it in order to disprove the conclusions of Shteyns and simultaneously to prove the instability of the capture hypothesis (if this were true, then there must occur at least 10 short-periodic comets with retrograde motion in the Jupiter family, which is not the case as is well-known; a number of further similar arguments are presented). Finally the authors point to an oversight in the elaborations

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33-35-3-16/27

On the Question Concerning the Capture Hypothesis of the Formation of Short-Periodic Comets

of Shteyns.
There are 2 tables, 1 figure, and 11 references, 7 of which are Soviet, 1 Polish, 2 English, and 1 American.

ASSOCIATION: Kafedra astronomii Kiyevskogo Gosudarstvennogo universiteta (Chair of Astronomy at the Kiyev State University)

SUBMITTED: January 25, 1958

Card 3/3

SOV/35-59-8-6186

Translation from: Referativnyy zhurnal, Astronomiya i Geodeziya, 1959, Nr 8, p 14

AUTHORS: Rubashevskiy, A.A., Vsekhsvyatskiy, S.K.

TITLE: The Positions of the Comets Arend-Roland and Mrkos

PERIODICAL: Astron. tsirkulyar, 1958, May 8, Nr 191, pp 1 - 3

ABSTRACT: The positions of the Arend-Roland Comet (1956 h) were determined from the plates obtained with a 40-cm double astrograph of the Crimean Observatory (F = 160 cm), the positions of the Mrkos planet (1957 d) - from the plates obtained with the big astrograph of the Kiyev Observatory (D = 20 cm; F = 4.3 m) and with the Telemar camera (D = 14 cm, F = 1.0 m). The results of the observations of the comets in 1957 are given [α, δ (1950.0), $p_\alpha\Delta$, $p_\delta\Delta$].

L.S.K.

Card 1/1

VSEKHSVYATSKIY, Sergey Konstantinovich; TSESEVICH, Vladimir Platonovich; GORDELADZE, Sh.G.; VER, A.Ya., red.

[Soviet astronomy on sun, stars, and planets] Radians'ka astronomiia pro sontse, zirky ta planety. Kyiv, 1959. 36 p. (Tovarystvo dlia poshyrennia politychnykh i naukovykh znan' Ukrains'koi RSR. Ser.5, no.8) (MIRA 12:8)
(Astronomy)

3(1) PHASE I BOOK EXPLOITATION SOV/3010

Vsekhsvyatskiy, Sergey Konstantinovich, and Vladimir Platonovich Tsesevich

Radyans'ka astronomiya pro sontse, zirky ta planety (Soviet Astronomy of the Sun, Stars, and Planets) Kyyiv, 1959. 36 p. (Series: Tovarystvo dlya poshyrennya politychnykh i naukovykh znan' Ukrayins'koyi RSR. Ser. 5, no. 8) 25,800 copies printed.

General Ed.: Sh. G. Gordeladze; Ed.: A.Ya. Ver.

PURPOSE: This booklet is intended for the general public.

COVERAGE: The booklet describes the development of astronomy under the Soviet regime and explains the achievements of Soviet scientists in their study of the Sun, the stars, and the planets. Among the scientists mentioned are: Ye. Ya. Bugoslavska, S.B. Pikel'ner, A.B. Severniy, V.A. Ambartsumyan, V.V. Sobolev, M.O. Kozyrev, E.R. Mustel', B.V. Kukharkin, D.Ya. Martinov, P.P. Parenago, Academician V.G. Fesenkov, M.P. Barabashev, V.V. Sharonov, G.A. Tikhov, A.G. Masevich, and Academician G.A. Shayn, who died in 1956. There are no references.

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TABLE OF CONTENTS:

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Development of Astronomy in the USSR

Study of the Sun by Soviet Scientists 7

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AVAILABLE: Library of Congress

Card 2/2

TM/gmp
12-31-59

S/035/62/000/005/066/098
A055/A101

AUTHOR: Vsekhsvyats'skiy, S. K.

TITLE: Comets, small bodies and Solar system problems. Part I, II

PERIODICAL: Referativnyy zhurnal. Astronomiya i Geodeziya, no. 5, 1962, 67, abstract 5A521 ("Visnyk Kyyivs'k. un-tu", 1959, no. 2, ser. astron. matem. ta mekhan., no. 2, 13-25, Ukrainian article; Russian summary)

TEXT: The author examines the objections formulated against the theory of the eruption of comets. He asserts that only this theory can explain the existence of periodic comets in the Solar system. There are 57 references.

[Abstracter's note: Complete translation]

Card 1/1

VSEKHSVYATSKIY, S.K.

Comments on Oort's works dealing with problems of the origin and evolution of comets. Publ.KAO no.8:13-20 '59. (MIRA 14:9)

(Comets)

VSEKHSVYATSKIY, S.K. [Vsekhsviats'kyi, S.K.], doktor fiz.-mat.nauk, prof.

Northern lights over Tiksi. Znan.ta pratsia no.11:6-7 N '59.
(MIRA 13:8)

(Tiksi--Auroras)

VSEKHSVYATSKIY, S.K.

Observations of the partial lunar eclipse of March 24, 1959.
Astron. tsir. no.201:7-9 Ap '59. (MIRA 13:2)

1.Kafedra astronomii Kiyevskogo gosudarstvennogo universiteta, Kiyev.
(Eclipses, Lunar--1959)

VSEKHSVYATSKIY, S.K.; DANILENKO, L.I.

Photographic photometry of Arend-Roland's comet (1956h) and Mrkos' comet (1957d). Astron.tsir. no.204:6-7 S '59. (MIRA 13:6)

1. Kiyevskiy gosudarstvennyy universitet, kafedra astronomii, Kiyev. (Comets) (Photometry, Astronomical)

VSEKHSVIATSKIY, S.K.

Brightness of the Giacobini-Zinner's comet (1959b). Astron.tsir. no.207:2-3 D '59. (MIRA 13:6)

1. Kafedra astronomii Kiyevskogog gosudarstvennogo universiteta.
(Comets--1959)

3(1) SOV/33-36-3-17/29

AUTHOR: Vsekhsvyatskiy, S.K.

TITLE: On the Nature of "Synchronic" Formations in Cometary Tails

PERIODICAL: Astronomicheskiy zhurnal, 1959, Vol 36, Nr 3, pp 503-511 (USSR)

ABSTRACT: The author considers the streaks in the tails of bright comets (1744, 1858 VI, 1910 I etc.) denoted as "synchrones" by Bredikhin. In the papers of N.D.Moiseyev, K.D.Pokrovskiy, S.V.Orlov it is assumed that the synchrones are originated by a simultaneous ejection of dust particles from the nucleus of the comet. The following facts contradict the assumptions: 1) the short life-time of the streaks; 2) the regular sequence of the streaks in tails; 3) the discrdance between the directions of the streaks and the conclusions of the theory; 4) the doublet structure of the streaks. The author conjectures electromagnetic appearances in the streaks. The analogy in the structure of the streaks and the rays of the polar solar corona confirms this conjecture. It is shown that the magnetic field strength in the tail of Mrkos comet was about 10 times smaller than in the solar corona. The

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On the Nature of "Synchronic" Formations in Cometary Tails SOV/33-36-3-17/29

calculation of the cometocentric coordinates used in the paper, was carried out under participation of L.Danilenko.
There are 5 figures, 4 tables, and 13 references, 9 of which are Soviet, 3 American, and 1 English.

ASSOCIATION: Kafedra astronomii Kiyevskogo gos. universiteta (Chair of Astronomy of the Kiyev State University)

SUBMITTED: November 11, 1958

Card 2/2

S/035/60/000/006/025/038
A001/A001

Translation from: Referativnyy zhurnal, Astronomiya i Geodeziya, 1960, No. 6, p. 64, # 5306

AUTHOR: Vsekhsvyatskiy, S. K.

TITLE: Observations of the Partial Lunar Eclipse of 1959, March 24

PERIODICAL: Astron. tsirkulyar, 1959, aprelya 15, No. 201, pp. 7-9

TEXT: Observations were made at the Kiyev Observatory by means of field glasses, binoculars and small telescopes. The instants of covering various formations on the Moon by the umbra border are given.

Translator's note: This is the full translation of the original Russian abstract.

Card 1/1

44256

3.1550

S/035/62/000/012/027/064
A001/A101

AUTHOR: Vsekhsvyats'kiy, S. K.

TITLE: On physical nature, evolution and origin of comets

PERIODICAL: Referativnyy zhurnal, Astronomiya i Geodeziya, no. 12, 1962, 72, abstract 12A536 ("Nauk. zap. Kyivs'k. un-t" 1959, v. 18, no. 3, 233 - 244, Ukrainian)

TEXT: The author analyzes data, up to 1956, on peculiarities in motion of various groups of comets in connection with characteristics of asteroids and several cometary meteor streams. He presents a brief survey of physical features of comets and results of studying their spectra. It is asserted that the data on distribution, motion and physical nature of comets are sufficient to draw conclusions on their origination as a result of ejections from surfaces of some planets and their satellites. In the author's opinion, objections advanced by a number of investigators against the ejection theory are inadequate. He maintains that many observational facts as to the surfaces of planets, satellites including the Moon, as well as the data of meteor astronomy confirm the theory of comet ejections. It is noted that the tenets of the ejection theory and the

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S/035/62/000/012/027/064
A001/A101

On physical nature, evolution and origin of comets

hypothesis by Olbers-Fesenkov-Oort deal with the same subject and complement each other. There are 44 references.

S. V.

[Abstracter's note: Complete translation]

Card 2/2

BRONSHTEN, V.A.; BUGOSLAVSKAYA, Ye.Ya.; BUGOSLAVSKAYA, N.Ya.; VSEKHSVYATSKIY, DAGAYEV, M.M.; LEPSKIY, M.M.; MIKHAYLOV, A.A.; SIVKOV, S.I.; TER-OGANEZOV, V.T.; RAKHLIN, I.Ye., red.; MURASHOVA, M.Ya., tekhn.red.

[Solar eclipses and observations of them] Solnechnye zatmeniia i ikh nabliudeniia. Sost.V.A.Bronshten i dr. Pod red. A.A.Mikhailova. Moskva, Gos.izd-vo fiziko-matem.lit-ry, 1960. 237 p.
(MIRA 14:1)

1. Vsesoyuznoye astronomo-geodezicheskoye obshchestvo. 2. Chlen-korrespondent AN SSSR (for Mikhaylov).
(Eclipses, Solar)

VSEKHSVYATSKIY, S.K.

Auroral observations in Tiksi Bay. Mezhdunar. goefiz. god [Kiev] no.2:55-61 '60. (MIRA 14:1)

1. Kiyev State University.
(Auroras--Spectra)

VSEKHSVYATSKIY, S.K.

Conference on problems of origin and evolution of comets and other minor celestial bodies of the solar system. Vop.kosm. 7:375-382 '60. (MIRA 13:11)

(Solar system--Congresses)

VSEKHSVYATSKIY, S.K. [Vsekhsviats'kyi, S.K.], doktor fiz.-mat.nauk, prof.

Planets of the solar system. Nauk i zhyttia 10 no.6: 41-45 Je '60. (MIRA 13:7)
(Planets)

3,1550 (1057, 1062, 1129)

3/022/60/013/005/008/008
C111/C222

AUTHOR: Vsekhsvyatskiy, S.K.

TITLE: On the Possibility of the Existence of a Ring of Comets and Meteorites Around Jupiter

PERIODICAL: Izvestiya Akademii nauk Armyanskoy SSR. Seriya fiziko-matematicheskikh nauk, 1960, Vol. 13, No. 5, pp. 73 - 88

TEXT: The author enumerates arguments of the theory of eruption for the existence of masses of comets and meteorites moving around the planets (existence of asteroids and meteor showers in central regions of the solar system ; the impossibility to explain by pulling in the small age and the peculiarities of the motions of short-periodic comets ; existence of the families of comets of Saturn, Uranus and Neptune ; the agreement of the chemical composition of the comet gases and the atmospheres of the planets; the peculiarities of the system of parabolic comets ; the presence of ice in the comets ; the results of structural and chemical investigations of the meteorites ; volcanic phenomena of the bodies of planets).
The author points to the essential alternations considered in the Saturn ring. With the aid of the measurements of Huyghens, O. Struwe, Ranyard, Henry, Rudaux and others the velocity of the extension of the rings of

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S/022/60/013/005/008/008
C111/C222

On the Possibility of the Existence of a Ring of Comets and Meteorites Around Jupiter

Saturn and their approximation to the planet are caloulated. For the full mechanic energy of the Saturn ring it is calculated : for the epoch of Huyghens $E = 4.75 \cdot 10^{12} \cdot 2.3 \cdot 10^{25}$ erg , for to-day : $E = 4.60 \cdot 10^{12} \cdot 2.3 \cdot 10^{25}$ erg. The loss of energy of $\Delta E = 3.10^{36}$ erg within 300 years must be caused by collisions and by resistances against motions. It is stated that the evolution of the ring is quicker than it was assumed till now. It can be assumed that also in the present time there happens a filling of the matter of the ring at the expenses of strong planetary eruptions.
The existence of active eruption processes in the system of Jupiter causes the author to assume that also around Jupiter there move masses of comets and meteorites in the form of a ring. The assumption of the existence of the ring is also supported by the often observed equatorial strip of Jupiter which is interpreted as a shadow of the ring. For a fortification of this interpretation the author investigates the mutual situations of the observer, Jupiter and the Sun for different observers (Lohse, Nijland).

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S/022/60/013/005/008/008
C111/C222

On the Possibility of the Existence of a Ring of Comets and Meteorites Around Jupiter

the times of the best possibility for the observation of the strip agree with the periods of the maximal cenographical latitude of the earth and the Sun.
The author mentions M.S. Bobrov, V.V. Sharonov, V.N. Lodochnikov, A.N. Zavaritskiy and V.G. Fesenkov.
There are 4 tables, 4 figures and 10 references : 6 Soviet, 2 American, 1 Dutch and 1 German.

ASSOCIATION: Kievskiy gosudarstvennyy institut, kafeda astronomii (Kiev State University, Chair of Astronomy)

SUBMITTED: July 26, 1960

Card 3/3

VSEKHSVYATSKIY, S.K.

Minor bodies of the solar system and the earth's volcanic activity. (MIRA 13:12)
Vest. LGU 15 no.24:5-16 '60.
(Comets) (Meteorites) (Volcanoes)

85544

S/026/60/000/009/009/010
A166/A029

3,1550 (1057, 1062, 1129)

AUTHOR: Vsekhsvyatskiy, S.K., Doctor of Physico-Mathematical Sciences

TITLE: The Ring of Comets and Meteorites Around Jupiter

PERIODICAL: Priroda, 1960, 49 No. 9, pp. 87 - 88

TEXT: Saturn appears to be surrounded by rings consisting of comets, meteorites, ash particles and gas. Changes in the divisions, light condensations and brilliance indicate that the rings are still being replenished with new matter. In the course of 300 years the line of rings has approached 9,000 km (0.15 of Saturn's radius) nearer to the surface of the planet, i.e., a reduction of 10^{36} ergs in the total mechanical energy of the ring. This energy is expended in collisions between the particles of the ring and in the resistance of the gas medium in which they move. It is probable that a similar ring of comets and meteorites also exists around Jupiter. Observation of the equatorial band around the planet shows that the periods of stable visibility of the band correspond to the time of maximum latitude of the Sun and Earth in relation to Jupiter's equator. This fits in with the hypothesis that the band is the shadow of a ring surrounding the planet. This is also confirmed by a study of the band's position on the visible

Card 1/2

85544

S/026/60/000/009/009/010
A166/A029

The Ring of Comets and Meteorites Around Jupiter

disc of Jupiter and by its nonhomogeneous structure in the periods when the Sun is near the low Joviocentric latitudes. These observations show that the ring is at a height of 1.4 + 1.0 of the planet's radius, while the inner edge of the ring is at a height of 0.6 - 0.3 of the radius. Comparison shows that the brilliance of the ears of the ring around Jupiter must be dozens of times less than that of the ring around Saturn under similar conditions.

ASSOCIATION: Kiyevskiy gosudarstvennyy universitet im. T.G. Shevchenko (Kiev State University imeni T.G. Shevchenko)

Card 2/2

88939

S/035/61/000/001/015/019
A001/A001

3.1550(1057,1062,1129)

Translation from: Referativnyy zhurnal, Astronomiya i Geodeziya, 1961, No. 1, p. 62, # 1A431

AUTHOR: Vsekhsvyatskiy, S.K.

TITLE: The Ring of Comets and Meteorites Around Jupiter

PERIODICAL: "Astron. tsirkulyar", 1960, aprelya 15, No. 210, pp. 9 - 11

TEXT: The author assumes that processes of explosive or volcanic nature proceed on the surface of Jupiter and Saturn. He arrives at a conclusion that a portion of ejected substance, which can not escape the planet's attraction space forms a system of satellites or rings of the Saturn-ring type. The narrow equatorial belt observed in the middle of the light equatorial Jupiter's zone may happen to be the shadow of the planet's comet-meteoritic ring. The altitude of the ring is within the limits of 1.4 - 1.0 Jovian radii, its inner boundary lies at an altitude of 0.6 - 0.3 radii. To prove the hypothesis on the existence of Jupiter's ring, observations with large telescopes are necessary which would be able: 1) to determine the position and width of the equatorial belt, 2) to

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88939

S/035/61/000/001/015/019
A001/A001

The Ring of Comets and Meteorites Around Jupiter

establish the existence of ring loops whose brightness may be lower than that of Saturn by several scores of times, 3) to determine rotational speed of some details of the equatorial belt (if it were shadow, its angular velocity should be higher by a factor of 1.5 - 2 than that of the details on the disk).

N. Kukarkina

Translator's note: This is the full translation of the original Russian abstract.

Card 2/2

VSEKHSVYATSKIY, S.K.

Burnham's comet (1959k). Astron.tsir. no.211:2 My '60.(MIRA 13:10)

(Comets--1959)

VSEKHSVYATSKIY, S.K.

Brightness and peculiarities of the appearance of Burnham's comet (1959k). Astron. tsir. no. 214:6-9 S '60. (MIRA 14:1)

1. Kafedra astronomii Kiyevskogo gosudarstvennogo universiteta im. T.G. Shevchenko.
(Comets—1959)

30810
S/035/62/000/006/018/064
A001/A101

3 2430

AUTHOR: Vsekhsvyatskiy, S. K.

TITLE: The problem of solar corpuscular radiation

PERIODICAL: Referativnyy zhurnal, Astronomiya i Geodeziya, no. 6, 1962, 57, abstract 6A422 ("Astron. tsirkulyar", 1960, 15 sent., no. 214, 15 - 16)

TEXT: The author considers the problem of stability of the solar coronal structure (assuming the corpuscular nature of this structure) by studying correlations between progressing of characteristics of geomagnetic activity in 27-day time intervals. He holds that high correlation coefficients of the connections considered testifies to stability of corpuscular structure. It has been established that: 1) corpuscular structure is characterized by radial directivity; 2) stability of coronal structure increases toward the minimum of solar activity; 3) there is no direct correlation between sunspots, faculas, flocculi and geomagnetic variations; 4) isorotation and stable structures can exist only provided the velocities of corpuscles are approximately equal; 5)

Card 1/2

S/035/62/000/006/018/064
A001/A101

The problem of solar corpuscular radiation

active processes on the solar surface contribute to replenishment by corpuscles of already existing coronal forms; geomagnetic field is considered as a recording mechanism which registers the space distribution and concentration of particles in the corpuscular structure of the Sun.

I. Shch.-S.

[Abstracter's note: Complete translation]

Card 2/2

NAZARCHUK, Galina Kirillovna; VSEKHSVYATSKIY, S.K., doktor fiziko-matem. nauk, otv.red.; STAROSTENKO, T.N., red.; MATVIYCHUK, A.A., tekhn.red.

[Solar eclipse of 1961 in the Ukraine] Solnechnoe zatmenie na Ukraine v 1961 godu. Kiev, 1961. 46 p. (Obshchestvo po rasprostraneniiu politicheskikh i nauchnykh znanii Ukrainskoi SSR. Ser.6, no.1). (MIRA 14:1)
(Eclipses, Solar--1961)

VSEKHSVYATSKIY, S. K.

"Structure of solar corona in connection with corpuscular streams."

report to be submitted for the IAU Symposium on the Corona, Cloudcroft, New Mexico, 28-30 Aug 1961.

VSEKHSVYATSKIY, Sergey Konstantinovich, doktor fiziko-matem. nauk, prof.; GORDELADZE, Sh.G., kand. fiziko-matem. nauk, dots., otv. red.; VYADRO, Sh.Ya., red.; MATVIICHUK, A.A., tekhn. red.

[Current problems in the study of the nearest planets] Sovremennye problemy issledovaniia blizhaishikh planet. Kiev, Ob-vo po rasprostraneniiu polit. i nauch. znanii USSR, 1961. 48 p. (MIRA 15:2)

(Planets--Observation)

VSEKHSVYATSKIY, Sergey Konstantinovich, prof.; KAZYUTINSKIY, Vadim Vasil'yevich, aspirant; AMBARTSUMYAN, V.A., akademik; KNYAZEVA, L., red.; KLIMOVA, T., tekhn. red.

[Birth of worlds; philosophical problems in modern cosmogony] Rozhdenie mirov; filosofskie problemy sovremennoi kosmogonii. Predisl. V.A.Ambartsumiana. Moskva, Gos. izd-vo polit. lit-ry, 1961. 173 p. (MIRA 14:10)

1. Kiyevskiy universitet (for Vsekhsvyatskiy, Kazyutinskiy).
(Cosmogony)

S/035/62/000/011/030/079
A001/A101

AUTHOR: Vsekhsvyatskiy, S. K.

TITLE: Some specific features in structural forms of auroras according to observations in the Tiksi Bay

PERIODICAL: Referativnyy zhurnal, Astronomiya i Geodeziya, no. 11, 1962, 67, abstract 11A488 ("Sb. rabot po Mezhdunar. geofiz. godu. Kiyevsk. un-t", 1961, no. 1, 52 - 57)

TEXT: Observations of auroras were conducted in the Tiksi Bay, both visually and with a full-sky camera, during December 1957 and January - March 1958. The author describes development of auroral forms, their alternation, the structure of arc and ray elements of auroras, and occurrence of doublets in ray systems.

[Abstracter's note: Complete translation]

Card 1/1

3,1550

S/035/62/000/007/052/083
A001/A101

AUTHOR: Vsekhsvyatskiy, S. K.

TITLE: On the nature of "synchronous" formations in cometary tails

PERIODICAL: Referativnyy zhurnal, Astronomiya i Geodeziya, no. 7, 1962, 77, abstract 7A553 ("Visnyk Kyivs'k. un-tu", 1960 (1961), no. 3, ser. astron., fiz. ta khimii, no. 2, 101-109, Ukrainian, Russian summary)

TEXT: It is noted that bands observed in tails of some bright comets (1744, 1858 VI, 1910 I, etc.), named by Bredikhin "synchrons", do not correspond to the hypothesis of simultaneous ejections of particles from the cometary core. The following facts contradict the classic concepts: Short time of band existence, regular sequence of bands in the tails, disagreement of the observed and theoretical directions of bands, doublet structure of bands. Band systems in the II-type tail of the Mrkos comet (1957 d) have been studied, and the sharp disagreement of their directions with theoretical synchrons is established. On the basis of the close analogy in structure and specific features of synchrons in comets and rays of the polar solar corona, a conjecture is expressed on the electron nature of these formations. Synchrons may be a manifestation of force lines of the magnetic field of the solar system or of frozen-in force lines transported by corpuscular

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S/035/62/000/007/052/083
A001/A101

On the nature of "synchronous" formations in...

streams; intensity of a magnetic field in a cometary tail may be tens of times lower than that in the solar corona. Structural peculiarities in cometary tails (synchrons, ray systems, etc.) can be explained only on the basis of the notion of electromagnetic processes in cometary plasma. There are 14 references.

S. V.

[Abstracter's note: Complete translation]

Card 2/2

VSEKHSVYATSKIY, S.K. [Vsekhsviats'kyi, S.K.], prof., doktor fiz.-mat.nauk

Solution of mysteries draws nearer. Nauka i zhyttia 11 no.1 [illegible] Ja '61. (MIRA 14:3)
(Astrophysics)

VSEKHSVYATSKIY, S.K. [Vsekhsviats'kyi, S.K.], doktor fiz.-matem. nauk, prof.

Small bodies and the problems of planets. Nauka i zhyttia 11 no.7:18-21 Jl '61. (MIRA 14:8)
(Astrophysics)

VSEKHSVYATSKIY, S.K. [Vsekhsviats'yi, S.K.], prof., doktor fiz.-matem.nauk

Astral way of mankind. Nauka i zhyttia 11 no.8:12 Ag '61. (MIRA 14:12)

(Astronautics)

VSEKHSVYATSKIY, S.K.; IVANCHUK, V.I.

Structure of the solar corona of February 15, 1961. Astron.zhur. 38 no.5:855-860 S-O '61. (MIRA 14:9)

1. Kiyevskiy gosudarstvennyy universitet im. T.G.Shevchenko.
(Sun--Corona)

VSEKHSVYATSKIY, S.K.

Observations of total solar eclipse of February 15, 1961.
Astron.tsir. no.220:12-13 Ag '61. (MIRA 14:10)

1. Kafedra astronomii Kiyevskogo gosudarstvennogo universiteta.
(Eclipses, Solar--1961)

VSEKHSVYATSKIY, S.K.; IVANCHUK, V.I.

General structure of the solar corona of February 15, 1961. Astron. tsir. no.222:3-6 My '61. (MIRA 15:4)

1. Kafedra astronomii Kiyevskogo gosudarstvennogo universiteta.
(Sun—Corona)

VSEKHSVYATSKAYA, Ye.I.; VSEKHSVYATSKIY, S.K.

Bright fireball above Kiev. Astron.tsir. no.226:13 C '61. (MIRA 16:1)

1. Kafedra astronomii Kiyevskogo universiteta.
(Meteors)

S/035/62/000/011/033/079
A001/A101

AUTHOR: Vsekhsvyatskiy, S. K.

TITLE: Problems of comets and the solar system

PERIODICAL: Referativnyy zhurnal, Astronomiya i Geodeziya, no. 11, 1962, 80, abstract 11A574 ("Tr. 3-go s"yezda Vses. astron.-geod. o-va, 1960", Moscow, AN SSSR, 1962, 107 - 118, Discuss. 165 - 168)

TEXT: This is the contents of a report held at the 3rd Congress of VAGO in Kiyev in April 1960. On the basis of an analysis of orbital characteristics of 564 comets and their absolute magnitudes, the hypothesis of capture is discussed and arguments are listed which testify against it: the number of short-periodic comets exceeds by 10^5 times the theoretical value; the insufficient number, in comparison with the theoretical one, of comets with periods from 30 to 1,000 years; the absence of short-periodic comets with retrograde motions, etc. The author holds that the existence of comet families of Jupiter, Saturn, Uranus and Neptune can be understood only on the basis of the hypothesis of comet ejection from the surface of the planets and satellites. The arguments for

Card 1/2

Problems of comets and the solar system

the ejection hypothesis are as follows: 1) A close correspondence of the observed and theoretical distributions of orbital elements; 2) correspondence of the chemical composition and structure of the comets and atmospheres of major planets and satellites, in particular the presence of "contaminated" ice in comets; 3) close encounters of short-periodic comets with Jupiter, 1/2 or 1 1/2 revolutions prior to emersion; 4) peculiarities and nature of the Saturn rings; 5) specific features of the structure and chemical composition of meteorites; 6) properties of short-periodic meteoric streams of the types β-Taurids, ξ-Perseids, Arietids; 7) manifestations of cosmic volcanism in planets and data on energies of terrestrial and lunar volcanic processes. The analysis of the problem of parabolic comets makes one to question the existence of the Schiaparelli-Oort comet cloud and leads to the conclusion as to the high level of volcanic activity in the solar system 10 to 100 million years ago.

S. Vsekhsvyatskiy

[Abstracter's note: Complete translation]

Card 2/2

VSEKHSVYATSKIY, S. K.

BOKHOV, M. S., Astronomical Council, Academy of Sciences USSR /1960/- "Optics and geometry in the matter of Saturn's rings"

PROKOF'YEV, Vladimir K., Crimean Astrophysical Laboratory imeni G. A. Shayn /1962/- "On the presence of oxygen in the atmosphere of Venus"

SALOMONOVICH, A. Ye., Physics Institute imeni P. N. Lebedev, Academy of Sciences USSR, and KUZ'MIN, Arkadiy D., Radio Astronomy Laboratory, Physics Institute imeni P. N. Lebedev, Academy of Sciences USSR - "Observations of the radioemission of Venus and Jupiter on the wave of 8 mm."

SALOMONOVICH, A. Ye., KUZ'MIN, Arkadiy D., and KISLYAKOV, A. G., - "Radioemission of Venus on the wave of 4 mm."

SALOMONOVICH, A. Ye., KUZ'MIN, Arkadiy D., MIKHNOVA, V. P., and SHAYKOVSKIY, I. V. - "Observations of the radioemission of Venus and Jupiter on the wave of 3.3 cm."

SALOMONOVICH, A. Ye., and KUZ'MIN, A. D. - "Radioemission of Venus on the wave of 9.6 cm."

SALOMONOVICH, A. Ye., and KUZ'MIN, A. D. - "Results of the observations of radioemission of Venus in 1961"

SHAROKOV, Vsevolod V., Director, Astronomical Observatory, Leningrad State University /1961 position/- "Probable state of the surface and atmosphere of the planet Mars according to photometric and colorimetric data"

VSEKHSVYATSKIY, Sergey K., Head of the Chair of Astronomy, Kiev State University /1961 position/- "Nature of Saturn's rings and signs of the existence of a ring around Jupiter"

YEZERSKIY, V. I., and NARAESHEV, E. P., Director, Kharkov Astronomical Observatory, Kharkov State University /1960 position/- "Optical properties of the atmosphere and surface of Mars according to photometric and spectrophotometric observations carried out at the Kharkov University Observatory"

Report to be submitted for the 11th Intl. Astrophysics Symposium, Belgian Nat. of Astrophysics, Cointe-Scleasin, Belgium, 9-11 Jul 1962.

S/269/63/000/002/035/037
A001/A101

AUTHOR: Vsekhsvyatskiy, S. K.

TITLE: Small bodies of the solar system and the problems of volcanism of the Earth

PERIODICAL: Referativnyy zhurnal, Astronomiya, no. 2, 1963, 70, abstract 2.51.566 (In collection: "Vopr. vulkanizma", M., AN SSSR, 1962, 73 - 84)

TEXT: The author enumerates principal arguments indicating, from his viewpoint, a considerable role of processes of cosmic volcanism in the history of the solar system. He estimates approximate intensity of these processes and considers some consequences of the Earth's volcanic activity in the course of its evolution. There are 24 references.

B. G.

[Abstracter's note: Complete translation]

Card 1/1

VSEKHSVYATSKIY, S.K.

Stormy processes on Jupiter. Astron.tsir. no.232:6-7 D '62. (MIRA 16:4)

1. Kiyevskiy gosudarstvennyy universitet im. Shevchenko.
(Jupiter (Planet))

VSEKHSVYATSKIY, S.K., prof.

Rings around planets. Znan.-sila 37 no.10:48-50 O '62. (MIRA 16:1)

(Astrophysics)

37394

S/033/62/039/002/008/014
E032/E314

3,1550

AUTHOR: Vsekhsvyatskiy, S.K.

TITLE: On the possible existence of a ring of comets and meteorites around Jupiter

PERIODICAL: Astronomicheskiy zhurnal, v. 39, no. 2, 1962, 290 - 302 + 1 plate

TEXT: In the first part of this paper the author gives a summary of arguments supporting the eruption theory, which lead to the conclusion that there are cometary and meteorite masses moving around planets of the solar system. The theory is then applied to the Saturn rings and a simple calculation is given of the reduction in the total energy of the particles in the ring, which is found to be

3×10^{36} erg over 300 years. It is pointed out that this figure is the lower limit for this energy change since the calculation does not take into account the entry of extraneous matter into the ring over this period. It is also estimated that the rate at which the meteoritic bodies from the ring reach

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S/033/62/039/002/008/014
E032/E314

On the possible existence ....

the surface of the planet is considerably greater than has been assumed up to now. Present results and the very existence of a plane ring independently suggests that the ring is being continuously replenished. It is assumed that powerful ejections from the surface of the planet (including satellites) must have occurred much later than the birth of the planet. All these calculations are based on the data of Otto Struve (19th century) and later observers. Published information on the equatorial band of Jupiter is then reviewed and the hypothesis that this band may be the shadow of a ring surrounding Jupiter is critically examined. It is shown that the best visibility of the bands occurs at maximum zenographic latitude of the Earth and the Sun, while the changes in the position of the band definitely suggest that it is in fact a shadow of an external ring surrounding the planet. It is suggested that a systematic programme be established for observation of the ring under standard conditions. It will be best to use violet and ultra-violet radiation and the ring is most likely to become

Card 2/3

S/033/62/039/002/008/014
E032/E314

On the possible existence ....

detectable for a zenographic latitude of the Earth close to zero. There are 3 figures and 5 tables.

ASSOCIATION: Kafedra astronomii Kiyevskogo gos. universiteta (Department of Astronomy of Kiyev State University)

SUBMITTED: February 3, 1960

Card 3/3

VSEKHSVYATSKIY, S.K.

Absolute magnitude of comets observed during 1954-1960.
Astron.zhur. 39 no.6:1094-1097 N-D '62. (MIRA 15:11)

1. Katedra astronomii Kiyevskogo gosudarstvennogo universiteta.
(Comets)

VSEKHSVYATSKIY, S. K.

Observations of Seki-Lines' comet (1962) in Kiev. Astron. zhur. 40 no.1:176-177 J-F '63. (MIRA 16:1)

1. Kafedra astronomii Kiyevskogo gosudarstvennogo universiteta.

(Comets—1962)

VSEKHSVYATSKIY, Sergey Konstantinovich; MARTYNENKO, L.I., red.; REKES, M.A., tekhn. red.

[Sun and interplanetary space] Solntse i mezhplanetnoe prostranstvo. Kiev, Izd-vo AN USSR, 1963. 83 p. (MIRA 17:2)

ASTAPOVICH, I. S.[Astapovych, I. S.], doktor fiz.-matem. nauk; VSEKHSVYATSKIY, S. K.[Vsekhsviats'kyi, S. K.], doktor fiz.-matem. nauk, prof.; GORDELADZE, Sh. G., kand. fiz.-matem. nauk; GURTOVENKO, Ye. A.[Hurtovenko, E. A.], kand. fiz.-matem. nauk; DROFA, V. K., kand. fiz.-matem. nauk; TORZHEVSKAYA, G. P.[Torzhevs'ka, H. P.], zhurnalist

Telescope of "Nauka i zhyttia." Nauka i zhyttia 12 no.2:32 F '63. (MIRA 16:4)

(Astronomy—Observations)

VSEKHSVYATSKIY, Sergey Konstantinovich [Vsekhsviats'kyi, S.K.]; FEDORENKO, V.F., red.; KHOKHANOVSKAYA, T.I.[Khokhanovs'ka, T.I.], tekhn. red.

[Origin and development of comets and other minor bodies] IAk vynykaiut' i rozvyvaiut'sia komety ta inshi mali tila. Kyiv, Vyd-vo Kyivs'koho univ., 1963. 93 p. (MIRA 16:12)

(Comets) (Meteors)

VSEKHSVYATSKIY, S.K., doktor fiz.-mat.nauk, prof.

Nature of changes on the surface of Jupiter. Geofiz. i astron. no.8:3-8 '65. (MIRA 19:1)

L 9413-66 EWT(1) GW

ACC NR: AT5028295 SOURCE CODE: UR/3133/65/000/008/0003/0008

AUTHOR: Vsekhsvyatskiy, S. K. -- Vsyekhsvyatsky, S. K. (Doctor of Physico-mathematical sciences, Professor) 55

ORG: Kiev State University (Kievskiy gosudarstvennyy universitet) 55

29
B+1

TITLE: On the nature of changes on the surface of Jupiter

SOURCE: AN UkrSSR. Mezhduvedomstvennyy geofizicheskiy komitet. Informatsionnyy byulleten'. no. 8, 1965. Geofizika i astronomiya (Geophysics and astronomy), 3-8

TOPIC TAGS: Jupiter planet, astronomic observatory, telescope/ AZT 7 telescope

ABSTRACT: The nature of the changes on the surface of Jupiter was studied on the basis of analysis of the vast changes observed since 1961 and of observations by the author at Kiev. It is concluded that the existing bands on the planet mark the positions of the centers of volcanic activity, which eject volcanic material during the entire period of visibility of the band. Migration of the bands with respect to the Joviographic latitude causes the appearance of new centers of volcanic activity. The appearance of dark equatorial belts in 1874 and 1961 can be explained only by the development of vast volcanic processes in the equatorial zone. With an increase in the volcanic activity on Jupiter, the integral luminosity can change not only because of widening and "darkening" of the bands, but also because of an increase in the total dust content (ash particles) in the atmosphere. The minimum volcanic activity

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L 9413-66
ACC NR: AT5028295

corresponds to overall lightening of the atmosphere, to weakening of the contrast between light zones and dark bands. The albedo is found to be 0.06 for the dark material of the band. The minimum amount of ash particles in the atmosphere of Jupiter is found to be on the order of 10^{21}-10^{22}. The need for systematic photoelectric recording of the integral luminosity of the planet and careful observations of changes on its surface is noted. Orig. art. has: 6 diagrams, 3 formulas, and 2 tables.

SUB CODE: 03/ SUBM DATE: none/ ORIG REF: 002/ OTH REF: 008

Card 2/2

VSEKHSVYATSKIY, S.K.

Comets as indicators of solar activity and the conditions prevailing in interplanetary space. Geofiz. biul. no.15: 61-63 '65. (MIRA 18:11)

VSEKHSVYATSKIY, S.K.

Nature of changes on the surface of Jupiter. Astron. zhur. 42 no.3: 639-644 My-Je '65. (MIRA 18:5)

1. Kiyevskiy gosudarstvennyy universitet, kafedra astronomii.

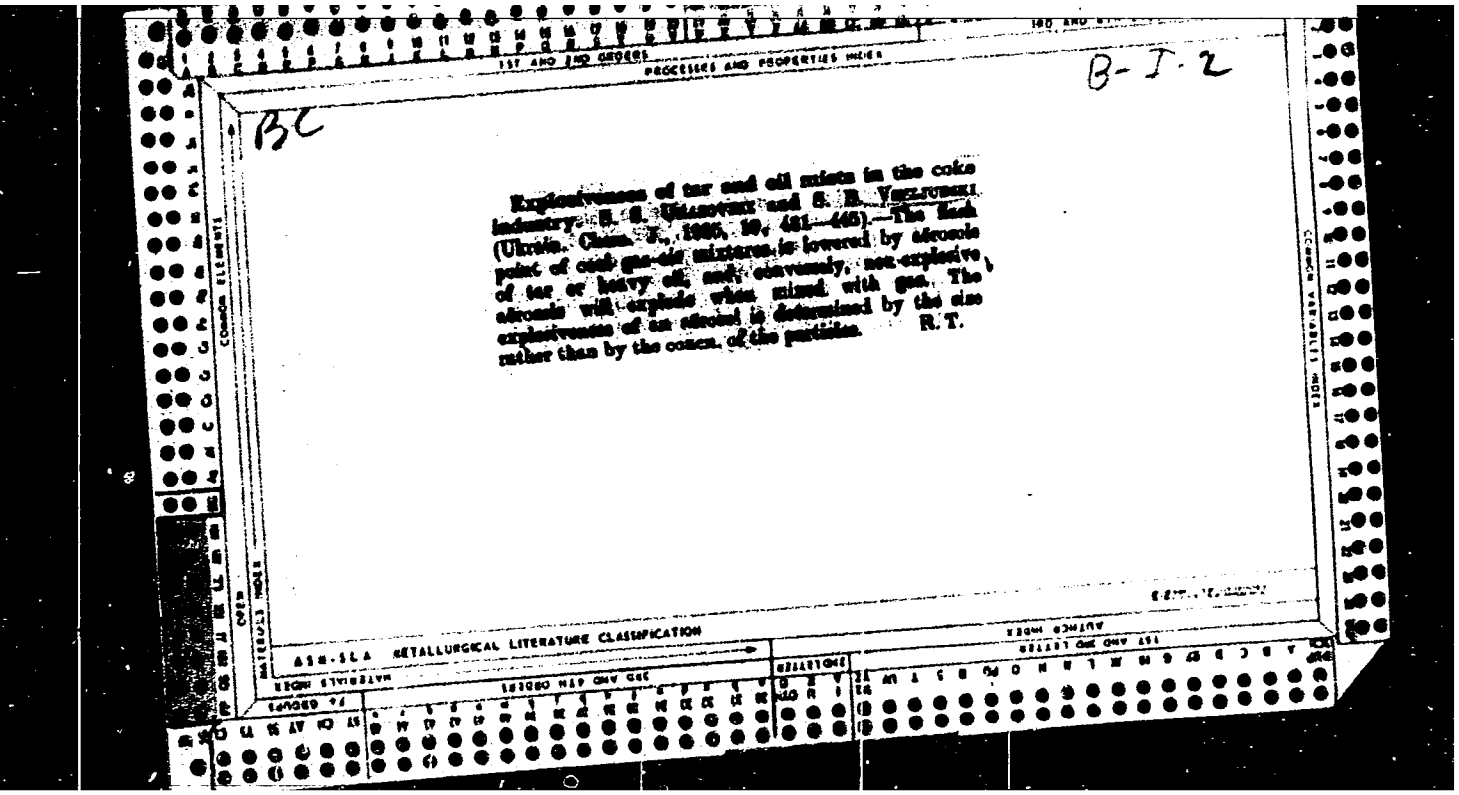
VSEKHSVYATSKIY, S.K.

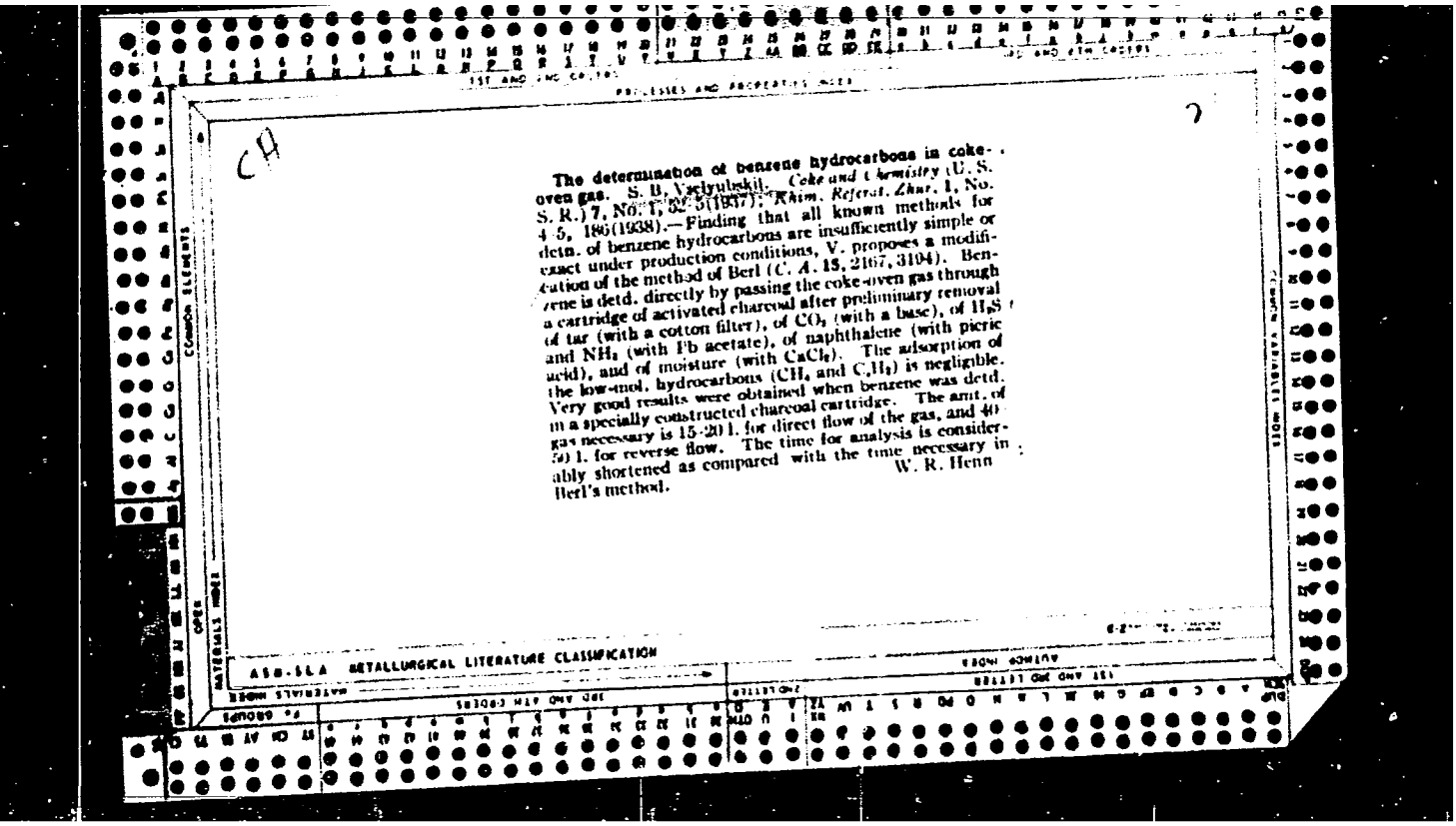
Problem of comets at the 11th Congress of the International Astronomical Union and recommendations for the 12th Congress. Biul. Kom. po komet. i meteor. AN SSSR no.9:44-47 '64. (MIRA 17:10)

1. Kiyevskiy gosudarstvennyy universitet, kafedra astronomii.

KOR[illegible], A. [illegible], Inzh.; [illegible], K.V., Inzh.; VOTYAKOV, A.D., Inzh.;
VSEKHVAL[illegible], I.[illegible], Inzh.; [illegible]IN, M.M., Inzh.

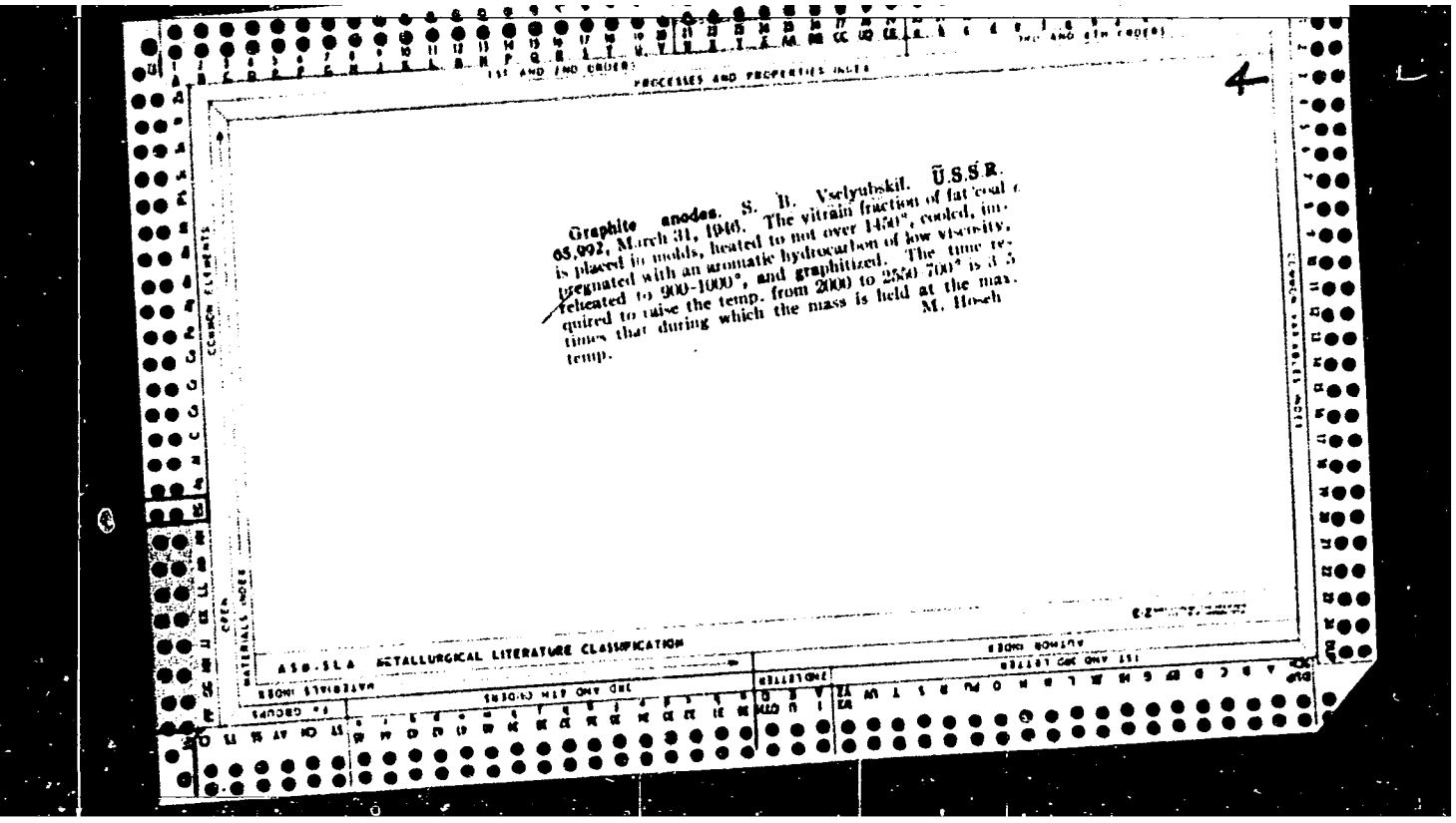
Sand and [illegible] from the wastes of asbestos [illegible] plants. Sbor. trud. [illegible] nauch.-issl. inst. po stroi. no.10:[illegible] '63. (MIRA 17:10)



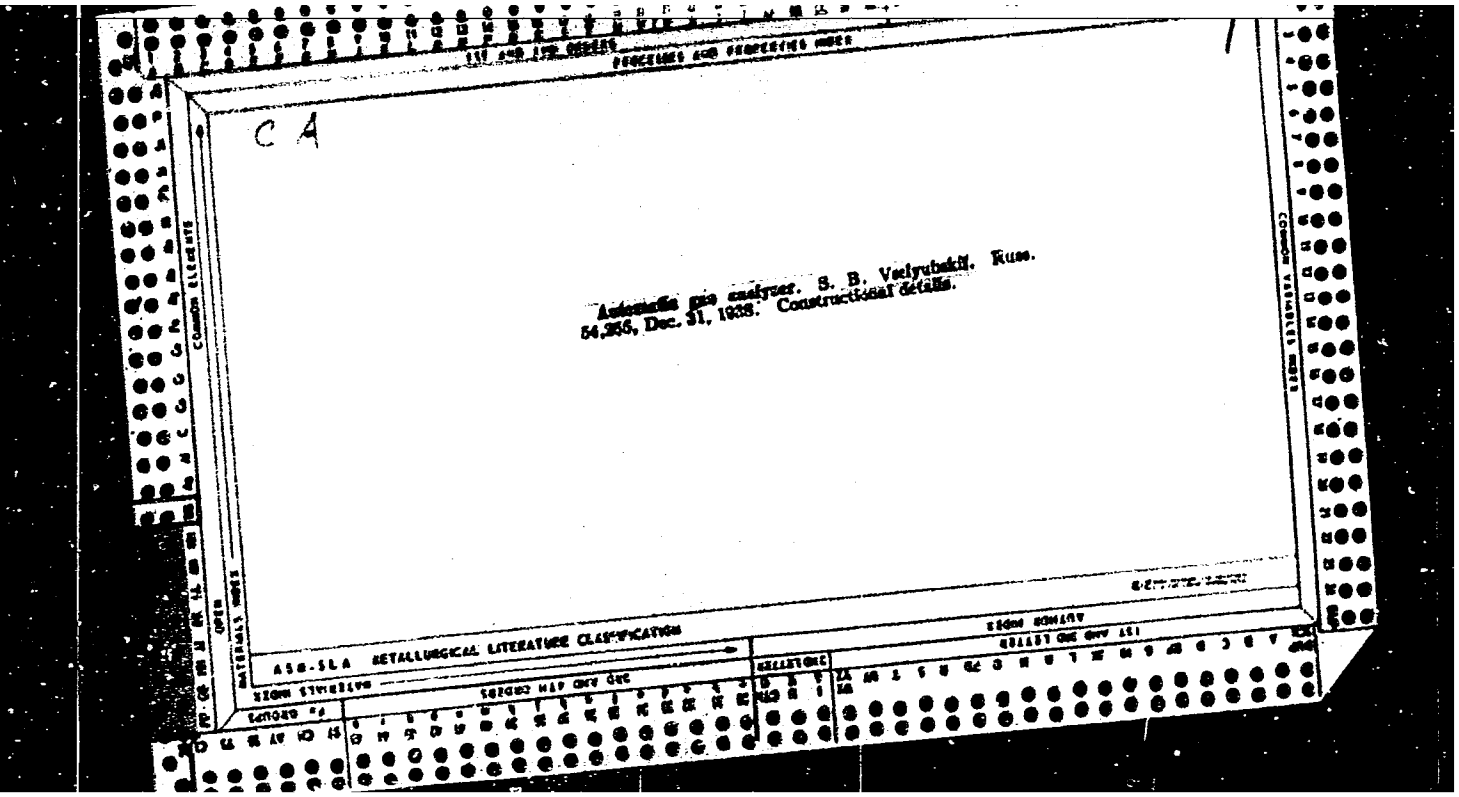


The determination of benzene hydrocarbons in coke-oven gas. S. B. Vaclyulskii. *Coke and Chemistry* (U. S. S. R.) 7, No. 1, 32-5(1937); *Khim. Referat. Zhur.* 1, No. 4-5, 186(1938).—Finding that all known methods for detn. of benzene hydrocarbons are insufficiently simple or exact under production conditions, V. proposes a modification of the method of Berl (*C. A.* 15, 2167, 3104). Benzene is detd. directly by passing the coke-oven gas through a cartridge of activated charcoal after preliminary removal of tar (with a cotton filter), of CO_2 (with a base), of H_2S and NH_3 (with Pb acetate), of naphthalene (with picric acid), and of moisture (with $CaCl_2$). The adsorption of the low-mol. hydrocarbons (CH_4 and C_2H_6) is negligible. Very good results were obtained when benzene was detd. in a specially constructed charcoal cartridge. The amt. of gas necessary is 15-20 l. for direct flow of the gas, and 40-50 l. for reverse flow. The time for analysis is considerably shortened as compared with the time necessary in Berl's method.

W. R. Henn



Graphite anodes. S. B. Vselyubskil. U.S.S.R. 65,992, March 31, 1946. The vitrain fraction of fat coal is placed in molds, heated to not over 145°, cooled, impregnated with an aromatic hydrocarbon of low viscosity, reheated to 900-1000°, and graphitized. The time required to raise the temp. from 2000 to 2550-700° is 3 times that during which the mass is held at the max. temp.
M. Hosch



USANOV, V.V., inzh.; Prinimali uchastiye: NAURITS, L.N., inzh.; TSIKLAURI, G.V.; SHISHOV, Ye.V.; VSEKHSVYATSKIY, V.N.; tekhnik; PONOMAREVA, T.A.; tekhnik; SHCHERBAKOV, V.D.; tekhnik; SPESIVYKH, A.F., tekhnik

Heat exchange and resistance in an axisymmetric nozzle at low supersonic speeds. Trudy VNIIKIMASH no.5:61-83 '62. (MIRA 18:3)

VSEKHSVYATSKIY, S.K.

[Comets in the period of the International Years of the Quiet Sun] Komety v period mezhdunarodnogo [sic] spokoinogo solntsa. Moskva, AN SSSR, 1964. 87 p. (MIRA 18:4)

S/0186/65/000/000 [illegible]

ACC [illegible] NR: AP50085?7

[illegible] Vavul, A. Ya.

[illegible] A method for producing modified carbon black. Class 22, No. 16915[illegible]

[illegible] Byulleten' izobreteniy i tovarnykh znakov, no. 7, 1965, [illegible]

[illegible] carbon black

ABSTRACT: This Author's Certificate introduces a method for producing modified carbon black by introducing admixtures to a liquid hydrocarbon stock or to a mixture of gas and carbon. The quality of the carbon black is improved and a wider [illegible] is provided by using organic or inorganic compounds of

ASSOCIATION: Nauchno-issledovatel'skiy institut shinnoy promyshlennosti (Scientific Research Institute of the Tire Industry)

SUBMITTED: [illegible]feb64 ENCL: 00 SUB CODE: MT

NO REF SOV: 000 OTHER: 000

Card 1/1

L 54829-65 EPF(c)/EWT(m)/EWP(j)/T Pr-4/Pc-4 RM

ACCESSION NR: AP5014945 UR/0065/65/000/006/0005/0010
66.092.11:542.973

AUTHORS: Klevtsova, V. P.; Rapoport, I. B.; Vselyubskiy, S. B.

TITLE: Synthesis of hydrocarbons with oxygen-containing compounds from CO and H_2 above the iron-copper catalysts

SOURCE: Khimiya i tekhnologiya topliv i masel, no. 6, 1965, 5-10

TOPIC TAGS: hydrocarbon, hydrocarbon conversion, synthetic hydrocarbon, synthesis property, oxygen compound, hydrogen, catalysis, catalyst carrier, catalytic activity, VTI gas testing device, TsIATIM 51 gas testing device

ABSTRACT: Precipitation of Fe-Cu catalysts (with a high content of metallic iron) and their behavior during the synthesis of products from CO + H_2 were studied to [illegible] of the metallic iron in the high volumetric rate syntheses. [illegible] content of metallic

and this propane

Card 1/4

L 54829-65
ACCESSION NR: AP5014945

testing devices. Different distillates were obtained from the liquid products and were analyzed for their content of alcohols, acids, esters, carbonyl, and unsaturated compounds. Variation in the catalytic activity of a Fe-Cu-Mn-potash agent was observed with the change in the amounts of its components. Best results were obtained with 100Fe : 20Cu : 4Mn : 0.75K_2O, producing 92 g/m^3 CO + H_2 of liquid and 45 g/m^3 CO + H_2 of gaseous hydrocarbons at 295C and 87% Co transformation. At 5% Cu the production of liquid hydrocarbons dropped to 61 g/m^3; at 1.2% K_2O the Co transformation dropped to 52% and the yield of liquid hydrocarbons to [illegible] reduction temperature on its activity is shown. [illegible] the yield

ASSOCIATION: VNII NP

SUBMITTED: 00 ENCL: 02 SUB CODE: OC

NO REF SOV: 008 OTHER: 006

Card 2/4

VSESLOVSKIY, I.A.; KUZNETSOVA, O.A.

A new frost-resistant potato hybrid. Bot. zhur. 48 no.4:564 Ap '63. (MIRA 16:5)

1. Leningradskiy sel'skokhozyaystvennyy institut. (Potato breeding)